Application No.: 10/518,014

## AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

## LISTING OF CLAIMS:

(currently amended): A method for producing a fluorocopolymer
which comprises a polymerization reaction of a fluorine-containing ethylenic monomer
with at least one fluorovinyl ether derivative represented by the following general
formula (I):

$$CF_2 = CF - O - [CF_2CF(CF_3)O]_n - (CF_2)_m - A$$
 (I)

(wherein n represents an integer of 0 to 3, m represents an integer of 1 to 5, and A represents –SO<sub>2</sub>X or –COOY; X represents a halogen atom or –NR<sup>1</sup>R<sup>2</sup>; R<sup>1</sup> and R<sup>2</sup> are the same or different and each represents a hydrogen atom, an alkali metal, an alkyl group or a sulfonyl-containing group and Y represents a hydrogen atom or an alkyl group having 1 to 4 carbon atoms) to give a fluorocopolymer,

said fluorine-containing ethylenic monomer being a perhaloethylenic monomer represented by the following general formula (II):

$$CF_2 = CF - R_f^1$$
 (II)

(wherein  $R_f^1$  represents a fluorine atom, a chlorine atom,  $R_f^2$  or  $OR_f^2$ ;  $R_f^2$  represents a straight or branched perfluoroalkyl group having 1 to 9 carbon atoms, which may have an ether oxygen atom(s)) and/or a hydrogen-containing fluoroethylenic monomer represented by the following general formula (III):

$$CHX^1 = CFX^2$$
 (III)

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(wherein  $X^1$  represents a hydrogen atom or a fluorine atom and  $X^2$  represents a hydrogen atom, a fluorine atom, a chlorine atom,  $R_f^3$  or  $OR_f^3$ ;  $R_f^3$  represents a straight or branched perfluoroalkyl group having 1 to 9 carbon atoms, which may have an ether oxygen atom(s)) and

said polymerization reaction being carried out in a saturated perfluorohydrocarbon while additional feeding of said fluorine-containing ethylenic monomer and said fluorovinyl ether derivative being carried out.

- 2. (original): The method for producing a fluorocopolymer according to Claim 1, wherein the polymerization reaction brings a mass of the fluorocopolymer relative to a volume of a polymerization solution to arrive at 30 g/L or a higher level.
- 3. (previously presented): The method for producing a fluorocopolymer according to Claim 1,

wherein the saturated perfluorohydrocarbon has 20 or less than 20 carbon atoms and has a cyclic structure or linear structure each optionally with a branched structure.

- 4. (original): The method for producing a fluorocopolymer according to Claim 1, wherein the saturated perfluorohydrocarbon is a perfluorohexane or a perfluorocyclobutane.
- 5. (currently amended): The method for producing a fluorocopolymer according to Claim 1,

wherein the fluorine-containing ethylenic monomer is  $CF_2=CF_2$ , n-is 0 (zero), m is 2 and A is  $SO_2F$  and wherein the fluorovinyl ether derivative represented by general formula (I) is  $CF_2=CF-O-CF_2CF_2-SO_2F$ .

6. (previously presented): A fluorocopolymer produced by the method for producing a fluorocopolymer according to Claim 1.

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7. (original): The fluorocopolymer according to Claim 6 which satisfies the following relations (a) and (b):

$$0 \le \Delta H \le 6.375 - 0.475C (5 \le C \le 13)$$
 (a)

$$0 \le \Delta H \le 0.2 (13 < C \le 18)$$
 (b)

where  $\Delta H$  is a heat of fusion (in J/g) as appearing at 315 to 325°C upon measurement with a differential scanning calorimeter and C is a fluorovinyl ether derivative unit content (in mole percent) in the fluorocopolymer.

- 8. (previously presented): A molded article formed from the fluorocopolymer according to Claim 6.
- 9. (original): The molded article according to Claim 8, which forms a membrane.
- 10. (previously presented): A solid polyelectrolyte fuel cell comprising the molded article according to Claim 8.